

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,596	03/14/2002	Gerhard Rinninger	15028	8380

7590 07/18/2003

Scully Scott Murphy & Presser  
400 Garden City Plaza  
Garden City, NY 11530

EXAMINER
----------

RODRIGUEZ, WILLIAM H

ART UNIT	PAPER NUMBER
----------	--------------

3746

DATE MAILED: 07/18/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/018,596

Applicant(s)

RINNINGER ET AL.

Examiner

William H. Rodriguez

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/14/02(preliminary amendment).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

✓ 1. The specification is objected to because the following titles are missing: Background of the Invention, Field of the Invention, Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98, Brief Summary of the Invention, Brief Description of the Several Views of the Drawing(s) and Detailed Description of the Invention. Correction is required.

### *Claim Objections*

✓ 2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 11-19 have been renumbered as claims 10-18 respectively. There was not a claim 10 in the originally filed application.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-18 (old claims 11-19) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3746

4. Claim 10 recites the term "can be" in line 1. These are desired results that do not have structure for accomplishing statements being claimed as the invention. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 10 and 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by **Becker** (U.S. 3,947,156).

FIG. 1

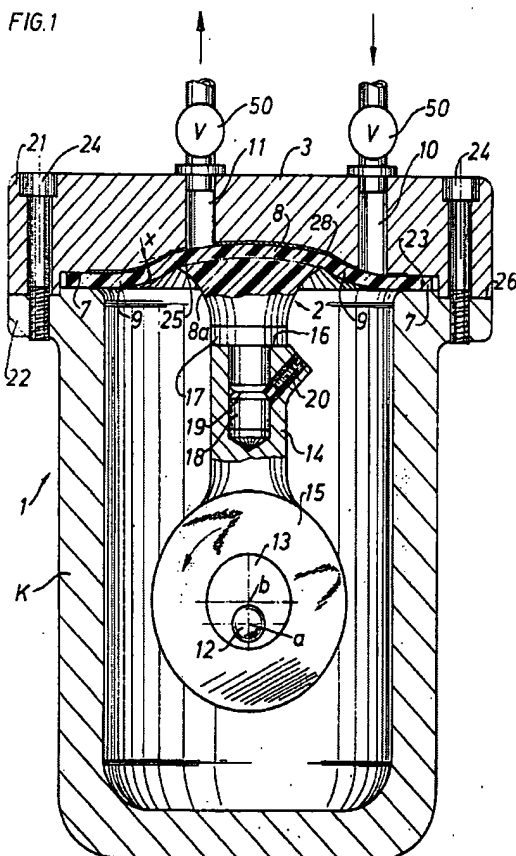
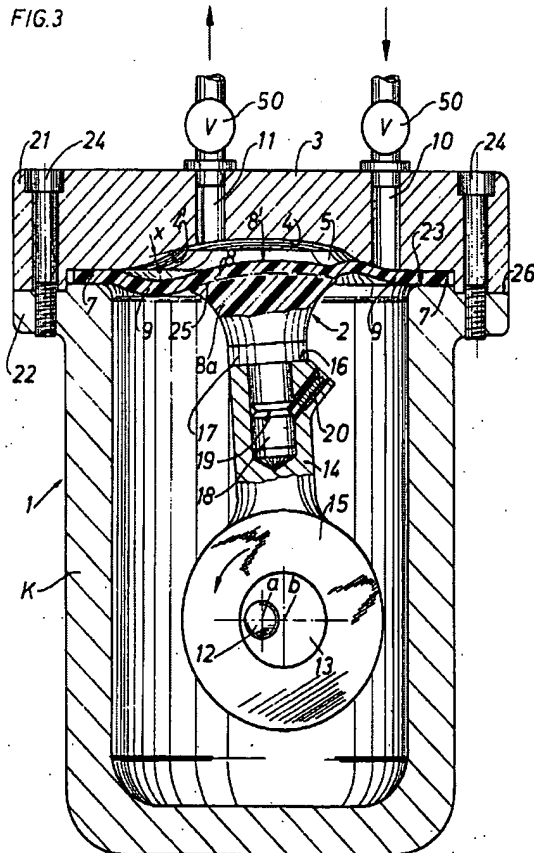


FIG. 3



7. With respect to claim 10, **Becker** teaches a pump having a membrane 2 actuated by a crank drive, said membrane 2 bounds together with a concave pump body surface 4, a pump chamber 5, an inlet channel 10 and an outlet channel 11 which open out at an inlet opening and an outlet opening in the pump body surface 4, the membrane 2 having a membrane core 8a and an elastically deformable membrane ring 8 and the membrane core 8a having a convex surface adapted to the pump body surface 4, whereby the inlet opening is arranged in a region of the pump body surface 4 which the membrane 2 first approaches upon an expulsion stroke of the crank drive and the elastically deformable membrane ring 8 closes the inlet opening before the attainment of top dead center of the crank drive, wherein an inlet valve 50 is provided which is arranged in the region of the inlet opening of the inlet channel 10. See particularly **Figures 1, 3.**

8. With respect to claim 12, **Becker** teaches that the inlet opening has a surrounding edge (area surrounding the inlet opening) against which the elastically deformable membrane closes the inlet valve. See particularly **Figures 1, 3.**

9. With respect to claim 13, **Becker** teaches that the middle point of the inlet opening I lies at least approximately in the plane of rotation of the crank of the crank drive. See particularly **Figures 1, 3.**

10. With respect to claim 14, **Becker** teaches that the elastically deformable membrane ring 8 closes the inlet opening at a crank rotary position of the crank drive which is up to 90 degrees before top dead center. Notice that **Figure 1** is the TDC position while **Figure 3** is 90 degrees before TDC. To see this, refer to the location of the axes **a** and **b** corresponding to elements 12 and 13 respectively. As you can see from **Figure 3**, axis **a** and **b** are 90 degrees before TDC. See particularly **Figures 1, 3** and compare the location of elements **a** and **b**.

Art Unit: 3746

11. With respect to claim 15, **Becker** teaches that the elastically deformable membrane ring 8 closes the inlet opening at a crank rotary position of the crank drive which is 20 degrees to 90 degrees before top dead center. See particularly **Figures 1, 3** and compare the location of elements a and b.

12. With respect to claim 16, **Becker** teaches that the middle axis of the inlet channel 10 is orientated perpendicularly to the pump body surface 4. See particularly **Figures 1, 3**.

13. With respect to claim 17, **Becker** teaches that the outlet opening of the outlet channel 11 is arranged in a region of the pump body surface 4 which the membrane 2 approaches last and which is attained by the membrane 2 at the earliest at top dead center of the crank drive. See particularly **Figures 1, 3**.

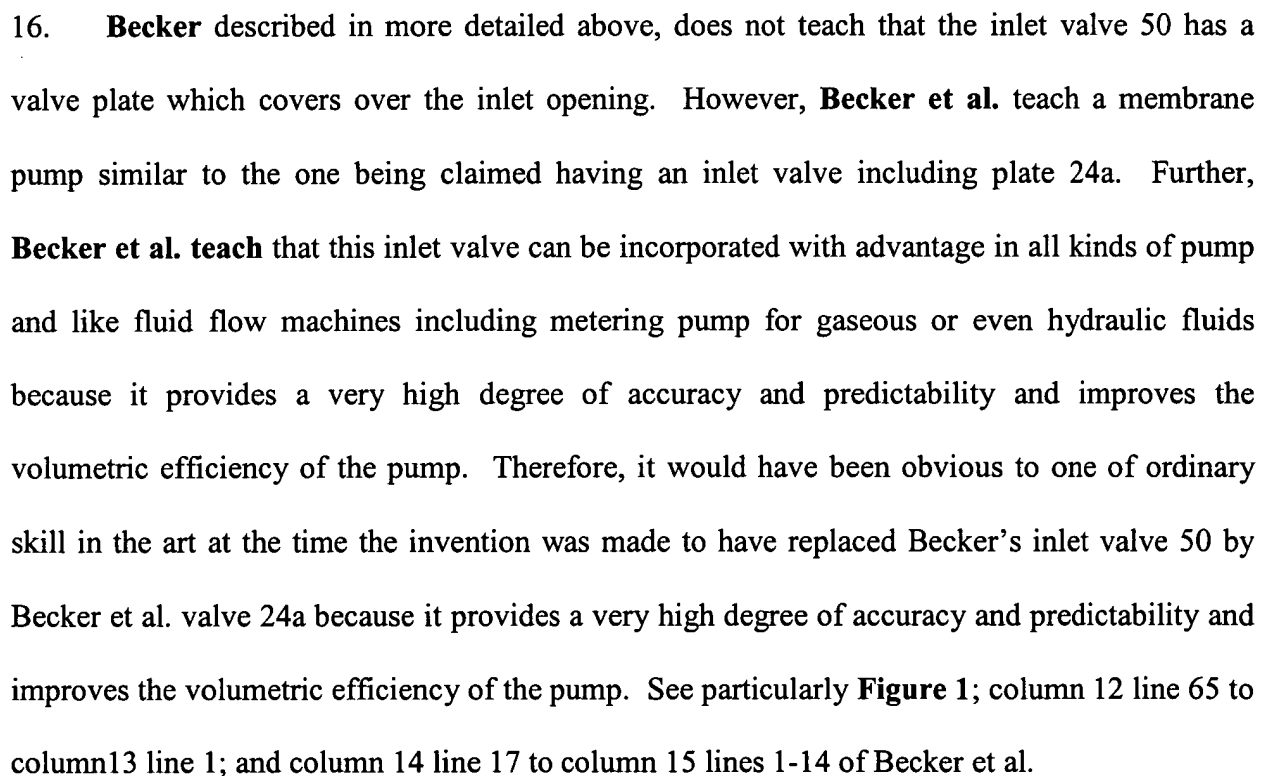
14. With respect to claim 18, **Becker** teaches that the middle point of the outlet opening of the outlet channel 11 is arranged in an inner region of the pump body surface 4 which lies opposite to the membrane core 8a of the membrane 2. See particularly **Figures 1, 3**.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Becker (U.S. 3,947,156)** in view of **Becker et al. (U.S. 5,275,541)**.





Art Unit: 3746

***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bolt (U.S. 5,785,508) teaches a membrane pump including a diaphragm 5 having a similar structure to the one being claimed.

***Contact information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Rodriguez whose telephone number is 703-605-1140. The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 703-308-0102. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

W.R

W.R  
July 14, 2003

*Cheryl J. Tyler*  
CHERYL J. TYLER  
PRIMARY EXAMINER